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# Knowledge transfer in educational institutions in light of social epistemology

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## Abstract

The field of social epistemology has been producing new discourses about knowledge generation and transfer while not forgetting the social aspects of them. One of its contributions is the acknowledgment of epistemic agents other than some lone subject in transferring and generating knowledge. For many centuries, people have been receiving knowledge through educational institutions. Social epistemology now allows us to reexamine the epistemology of education, primarily since education is usually made up of testimonial knowledge—knowledge that is “transferred” by teachers to students simply by the account of the teacher’s position as the educator. Philosophy of education, up until recently, has been concerned with types of education ideally pursued by students. However, social epistemology has turned our attention to aspects beyond normativity and set about the questioning of the nature of knowledge in education in the first place. We will see how, using social epistemology as a framework, new approaches to inquire about education and the transfer of knowledge can be determined. This paper will examine the changes in which we understand knowledge transfer done by educational institutions, particularly schools, considering the advances made in the field of social epistemology. The hopes of the exploration carried out in this paper are to reassess the way we go about the philosophy of education and to ignite further discussions concerning social epistemology and its impact on education.

## Keywords

philosophy of education, knowledge transfer, school, social epistemology, testimony

## 1 Introduction

The philosophy of education has been concerned with the ideal education. Questions it might ask would be “How should education be commenced?”, “What should be in the curriculum and what should be left out?”, “What is the ideal way of learning?”. This paper proposes that we postpone the normative aspect of this discipline and focus more on the nature of education as the basis of our thinking forward. We should take a step back: how should we understand education and knowledge in the first place? A specific branch of this question will be covered in this paper: what is the nature of knowledge in educational institutions and how does it transfer? To answer that question, we could use social epistemology as a new mode of thinking because educational institutions are inherently social and we can start understanding education by taking a closer look at its social dimension.

Social epistemology (SE) is a relatively new idea in the epistemological approach. Social epistemology is associated with the social dimensions of knowledge, such as social relations, interests, roles, and institutions. The study of epistemology before SE puts an epistemic agent in isolation from other people or society and leaves out beliefs attributed to groups. This can now be called the traditional approach of epistemology. Traditional epistemology focuses on the intellectual behavior of individual persons rather than groups. This makes traditional (“individual”) epistemology incomplete. SE tries to readdress this problem by accounting for social interactions. SE (at least in one of its varieties) is concerned with collective epistemic agents, i.e. teams, juries, committees, corporations, and other kinds of collectivities that can plausibly be viewed as epistemic agents (Goldman, 2020). Put simply, social epistemology concerns itself with knowledge surrounding epistemic agents with the help of others, and those others can be referred to as collective agents or groups.

In using SE to examine education and schools, this paper will first explain the scope of SE. Next, it moves to establishing the school as an entity that is appropriate to be examined using SE by understanding its position as a social imaginary and epistemological group. Lastly, it will try to approach the question of the nature of knowledge in educational institutions as testimony that has been put to study by SE.

## 2 Social Epistemology

We could say that social epistemology is a branch of epistemology that studies the epistemic properties of individuals that arise from their relations to others, as well as the epistemic properties of groups or social systems. A simple example (of the first sort) is the transfer of knowledge or justification from one person to another (Goldman, 2009). Then, what legitimizes social epistemology as a new part of epistemology? It is best to answer that question through its history as to why it could exist in the first place.

We mentioned that traditional epistemology focuses on the intellectual behavior of an individual rather than a group. By this line, we know that traditional epistemology is not interested exclusively in knowledge. Is it best to say that SE started during Ancient Greece? Many philosophers influenced other philosophers. A famous example is how Plato influences his students, e.g. Aristotle through their interactions. This influence is proof that in the first place knowledge cannot be separated from our social dimensions. Plato had a role as a teacher who explained his ideas to his students, then the students, like Aristotele, played roles and had interests in it. Teacher-student roles we could see are part of the social dimension. But, we can't say that SE started during this period.

The term "social epistemology" was developed in the middle of the 20th century, preceded by an intellectual movement that flourished between the 1960s and 1980s, by sociologists and deconstructionists. Faces of the movement were Michel Foucault, Thomas Kuhn, Bruno Latour, Barry Barnes, David Bloor, Steven Shapin, and Richard Rorty, who argued against traditional epistemology.

Sociologists and deconstructionists rejected the traditional conception of knowledge as an accuracy of representation and sought to replace it with the notion of "social justification of belief" (Rorty, 1979). Not only rejecting, but other philosophers also try to consider the social dimension of knowledge. Thomas Kuhn (1962[1970]) held that purely objective considerations could never settle disputes between competing theories; hence scientific beliefs must be influenced by social factors. However, these talks of social dimensions sprung up many debates. These philosophical debates will always give us important insights, especially into the role of social dimension—cultural beliefs and bias in the generation of knowledge—as a new element in a new branch of epistemology.

Let us get clearer on how traditional epistemology works before we discuss more about social epistemology. According to Goldman, aspects of traditional epistemology includes: (1) The epistemic agents of traditional epistemology are exclusively individuals; (2) Focuses on the study of epistemic evaluation or normativity, represented by such evaluative concepts as justifiedness, rationality, and knowledge. Traditional epistemology asks questions such as how individuals can acquire knowledge and maintain justified or rational credal states; (3) Traditional epistemology assumes that the normative standards of rationality and justifiedness are not merely conventional or relativistic, but have some sort of objective validity. (4) The central notions of epistemic attainment—knowledge, and justification, for example—either entail truth or are closely linked to truth. A known proposition must be true; and justified beliefs, according to many mainstream views, are in some sense likely to be true.

Traditional epistemology is essentially individual epistemology. It considers a person who seeks knowledge alone. The consequence of individual epistemology is an epistemic disadvantage. It arises from a hermeneutical inequality that causes group experience to not be considered. This epistemic disadvantage happens when an attempt at intelligibility is handicapped by exclusionary practices that are merited, as opposed to deliberately and coercively maintained. In other words, there will be an epistemic disadvantage when a person or group without epistemic capability is harmed by one with a greater epistemic advantage. When one is in a greater epistemic position, such that others rely on one for their knowledge or expertise, epistemic harm can occur against those who are not in an equal position (Goldstein, 2022). In contrast, when we talk about social epistemology, social dimensions are involved. When a person seeks knowledge, their social interaction with others is considered.

SE seeks to hold the importance of interpersonal interaction; interpersonal interactions will generate knowledge. For example, since we are infants our parents will teach us how to express gratitude by saying "thank you". A normal toddler would know that saying "thank you" is basic manners when receiving a gift from others, for example. But it is certainly knowledge received because the toddler believed their parents. It is appropriate for SE to be used in one of its main focus areas, that is when a person believes what others

say to be true. As Goldman (2020) stated, "... very often we are persuaded by what others say, or take it as obvious that their word should be heeded."

It is worth noting that SE is not trying to abandon traditional/individual epistemology standards. SE still uses the main ideas of traditional epistemology but social dimensions must have a role in any minimal topic of epistemology.

Why we need social epistemology in answering problems of education is clear enough. Education is never a lonesome process. It is an interaction between teachers and students, often in the hopes of achieving some form of benefit for society as a whole (this will be elaborated on in the next section). Social dimensions necessarily prevail in the context of education: collective epistemic agents, institutions, and society. Therefore, it is not adequate to theorize about education with traditional epistemology. We could get somewhere with it, but we would not get far.

### 3 School as a Social Imaginary

To make school and education more palatable to be approached by social epistemology, let us first establish their position as some type of social fact and include it in our social ontology. There are many ways to do this, but for this paper, it will suffice to incorporate it into Charles Taylor's theory of social imaginaries.

School is associated with learning, science, social training, or more seriously, schools "educate the life of a nation"—to use the words from the opening of Indonesia's 1945 constitution. We can see that a school's existence reflects a goal tried to be achieved by society. A society's ideal is manifested through social institutions. This is articulated by Taylor as "modern social imaginaries" to describe how people imagine and work to maintain the society in which they live (Taylor, 2004). Social imaginary is a normative concept that resides within a society that imagines an ideal society. People who are in cohabitation can be socially glued to each other with social imaginaries, where they imagine their social existence, norms, interactions, hopes, ideas, and normative images that underlie all of the above. In addition to that, social imaginary is "that common understanding that makes possible common practices and a widely shared sense of legitimacy" (Taylor, 2004).

The concept presented by Taylor has some similarity to the "imagined community" developed by Benedict Anderson. Anderson (1983 [2006]) depicts a nation as a socially-constructed community, imagined by the people who perceive themselves as part of a group. This group is "imagined" because its members will never get to know all other members of the group, but they imagine a solidarity among themselves because of a sense of shared past and present, and a perceived shared future. In general, the members of an imagined community share the same set of myths and symbols, promoted by mass media, to create a sense of belonging to one community. For instance, supporters of football clubs may display the club flag or insignia on their social media profiles. These fans may never meet each other but they feel a strong sense of solidarity with each other. Those symbols function as an identity and tool to eliminate conflicts. Schools are also imagined communities within which the members form common myths, such as the ideal purpose, system, and method of education. But Taylor and Anderson differ in that a social imaginary often has a relatively restricted number of members and that it is often manifested in institutions, such as schools, whereas an imagined community takes a more abstract form in the imagination of its (often) greater number of members. Nonetheless, a school can be regarded as both to some degree.

A social imaginary reflects a value that can be manifested in institutions or laws that shape society as a whole. It can motivate an individual to cooperate with others to form some kind of social structure. Social imaginaries are understood as historical constructions determined by interactions between individuals (subjects) in society. Even so, imaginaries are not necessarily real since they are imaginative concepts that depend on particular social subjects.

Taylor's use of the concept of modern social imaginary was to explore the transition from premodern Western society, where hierarchical norms are flourishing, to modern times which tend to be more egalitarian. That egalitarian value rose from the spirit of the Renaissance that aspires to turn back to human beings as the measure of all things (i.e. humanism). There has been a shift in the conception of the social order that was previously divinely determined (by the Church) and arranged hierarchically, in which one individual is obliged to comply with what is designated in that moral order. The next social order was oriented toward the economy. Of primary importance in an economically framed moral order is the ability of individuals to engage in productive work and to create and maintain personal space for their family unit, along with the personal autonomy it requires (O'Neill, 2016). This opens opportunities for people to engage

in personal and public affairs by entering the public sphere. The public sphere is a shared social space, where individuals can associate themselves with each other to pursue common interests.

Next is the transition from societies ruled by monarchies towards a democratic society in modern times. This transition was marked by struggles, especially revolutions, which occurred because people were dissatisfied with the unjust exercise of power over their lives in the monarchy, so they sought to replace it with a more balanced government that could accommodate the interests of executive power, collective obligations, and individual freedom. Thus, Taylor makes the distinctions between social self-understanding in which modern social imaginary is manifested: the economy, the public sphere, and democratic self-governance (Taylor, 2004). Those efforts examined by Taylor show us forms of social imaginaries used by people who have succeeded in understanding the past that emerge new concepts of ideal social order.

It can be seen that social imaginaries are needed to form an ideal society, including education that is oriented towards these ideals. Public education, manifested especially through schools, is based on culturally selected ideas and ideals that must be accepted as meaningful and true for individuals, families, communities, and society as a whole. These social imaginary features are highly relevant to an appreciation of the general understanding that education shapes the origin, enactment, and ongoing contestation of certain educational policies and practices within a system (O'Neill, 2016).

Education, as stated in Indonesian Law No. 20 of 2003, article 1 verse 1, is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and the skills needed by themselves, society, nation, and state. The purpose of education is as an instrument in developing the potential of individuals, especially students, as efforts to make these individuals creative, innovative, capable, broad-minded, wise, and future-oriented, and become responsible and democratic citizens. Ki Hajar Dewantara, known as the father of education in Indonesia, maintained that education should ideally have national characteristics, namely that in Indonesian educational practices, nationalistic values should be instilled so that every citizen has national enthusiasm to realize independence through a spirit of patriotism to defend the country (Dewantara, 1989).

Hatta (1954) emphasized that the definition of education is an effort based on the spirit of one's ability to build national awareness based on Indonesian culture. Education is aimed at educating humans as individuals and as a part of society and is not only oriented towards intellectualism. People should have opportunities and access to education. The more people who are educated, the better and faster development will also run. The more people attain knowledge, the faster Indonesia's ideals will be realized. Education, through these characteristics, is a social imaginary.

Tan Malaka (1943) stated that education aims to sharpen intelligence, strengthen the will, and refine feelings. Teachers and other stakeholders must organize education in line with the purpose of education itself. The purpose of education is essentially to empower individuals to be able to live their best life in society. The ideal education is education that refines the mind and does not give birth to arrogance so as to make people feel as if they are hierarchically higher.

The educational concepts offered by educators and Indonesia's founding fathers emphasize independent education, that is education that frees the mind from intellectualist shackles, colonialism, discrimination, dehumanization, social exclusion, and a transactional culture of education.

These ideals are then manifested in educational practices such as the school curriculum. The curriculum contains lesson plans that are adjusted to the abilities of students which function as a tool to achieve the goals of that society. Hamalik (1990) mentions that there are three important roles of the curriculum: (1) Conservative role, that is the curriculum as a means of transmitting past cultural values that are still relevant to the younger generation; (2) creative role, that is the curriculum as the potential development of students to meet the needs of society in the present and the future; (3) critical and evaluative Role, that is the role of the curriculum in assessing and selecting values as well as new knowledge to be inherited so that it is in accordance with cultural values in society.

A curriculum and forms of schools in a given period reflect the ideas and ideals of dominant groups in society. "How one conceives of education ... is a function of how one conceives of the culture and its aims, professed or otherwise" (Bruner, 1996). The 1968 education curriculum in Indonesia or the *Kurikulum 1968* is a clear example where the New Order regime that was in power at that time wanted to replace the *Rentjana Pendidikan 1964* curriculum which was a product of the Old Order. The New Order was born as an effort to uphold Pancasila and the 1945 Constitution, in its constitutional practices, so the idea of liberal and guided democracy in the Old Order was rejected because it was considered contrary to Pancasila democracy. The 1968 curriculum aspires to form a true "Manusia Pancasila" (Pancasila-mensch), who are strong and physically healthy, with enhanced intelligence and physical skills, morals, character, and religious beliefs. In the 1968 curriculum, changes were made to the structure of the curriculum from

*pancaawardhana* education—development of creativity (*cipta*), taste (*rasa*), intention (*rasa*), work (*karsa*), and morals—to fostering the spirit of Pancasila, basic knowledge, and special skills.

Determining what and how education is organized will depend on the dominant group that has power in a certain period. The saying "*ganti menteri ganti kebijakan*", including curriculum and education or school administration, appears because the domination of certain groups in society will often change ideological and political values or certain objectives included in the framework of the school curriculum. Changes in orientation in education can occur due to public awareness of the social and economic injustices that exist in the community, and the community will form new imaginations about the ideal education for them. This ideal social imagination is justified by the dominant group by implementing it in educational practices, such as schools. We might ask, then, what causes social imaginary, such as school, to exist as something that is believed by certain groups?

#### 4 School as an Epistemological Group

The production of group beliefs by individuals can be understood through "judgment aggregation". Aggregation refers to metaphysical relations between the beliefs of group members and the beliefs of the groups they compose. It refers to how a set of beliefs by group members can give rise to beliefs held by the group. List and Pettit express these metaphysical relations like so:

"The things a group agent does are clearly determined by the things its members do: they cannot emerge independently. In particular, no group agent can form propositional attitudes without the latter's attitudes being determined, in one way or another, by certain contributions of its members, and no group agent can act without one or more of its members acting" (List & Pettit, 2011).

To achieve collective knowledge, groups of people who have knowledge or epistemic agents should have faith in an idea or social imaginary in the previous context or collective epistemic activity. Groups can act as epistemic agents above their individual members. Of course, not all groups are capable of forming collectively held beliefs, let alone knowledge. Whether they can form such beliefs depends on their institutional structure (formal or informal). An example of a group that is unable to form a collective belief is a random crowd in Malioboro street, for example. However, a group can be considered as an epistemic agent capable of gaining trust or even knowledge if the institutional structure of a group allows the group to make public declarations. An example might be a panel of experts or a research group issuing a joint report on some scientific matter, a monetary policy committee of a central bank making economic forecasts, or a court promulgating factual judgments relevant to some case. Another relevant one is school as one of the institutionalized social imaginary presupposing interests and collective belief in it by making reports on student learning outcomes as announcements of student evaluations.

Two models explain how an epistemic agent has a belief or idea about shared social life. The first model is the commitment model. A group *G* believes that *p* if and only if the members of *G* are jointly committed to believing that *p* as a body (Gilbert, 2004). Assuming that knowing requires believing, then *G* places the necessary conditions on group knowledge. What constitutes the existence of the committee in addition to its members? Committed members have goals; these goals are carried out by individual members in their role to the commitment. Individual commitment to the group is one way for an individual will to support the existence of the group. The commitment is guided by certain social norms. This model has two main premises, namely that there are norms that regulate commitment and there is a commitment to these norms. According to Gilbert (2004), social collectivity or social groups are formed by one or more shared commitments, so that, for example, there are two or more people who have never been together before which then become a group occurs because of the emergence of one or more collective beliefs between them. Then, it becomes a commitment. Examples of such groups include families, teams, clubs, or other similar associations, including schools as an implementation of educational institutions which presuppose a common commitment or goal. This commitment or goal can be manifested in the school curriculum, etc.

The second model is the distributed model of Alexander Bird (2014), which is when complex information cannot be obtained and processed by one individual, so epistemic agents display certain parts of the information while other individuals have the task of coordinating this information and using it to complete tasks. The example given by Bird (2004) for this model is in science, where scientists build on the work of other scientists. That includes using their experimental results and their theoretical conclusions. In modern science, a scientist is rarely able to reproduce all the experimental results on which his work depends for its epistemic justification. Belief in the scientific work of others is a ubiquitous and inescapable feature of science (Hardwig, 1991). Likewise in school practice, where the main actors consist of teachers

and students, teachers transfer their knowledge to students, and students try to sustain this knowledge to solve their problems.

As epistemological groups, what is the difference between schools and other educational institutions, such as universities? They carry out different epistemic practices. An epistemic practice is a socially organized and interactively accomplished way that group members propose to communicate, evaluate, and legitimize knowledge claims. Kelly and Licona (2018) mentioned that epistemic practice tends to be interactional (done between people through joint activities), contextual (located in social practices and cultural norms), and intertextual (communicated through coherent discourse, signs, and symbols). University as an educational institution is different in epistemic practice from school. Universities have a primary orientation to produce knowledge, prepare future professionals, conduct meaningful research, and engage with communities and stakeholders to address local, regional, national, and global challenges, in addition to providing education for individuals. Universities not only transfer knowledge but also produce it. Scott (as cited in Amaratunga & Senaratne, 2009) stated that “in a ‘knowledge society’ all students—certainly all graduates—have to be researchers. Not only are they engaged in production of knowledge; they must also be educated to cope with risks and uncertainties generated by the advance of science.” The triple helix model has recently become popular as an innovation to address socio-economic problems. The triple helix model is a depiction as well as a symbol of innovators. This concept is based on the idea that innovation is an interactive outcome involving various types of actors. This concept was introduced by Etzkowitz and Leydesdorff in 1995 in *University-Industry-Government Relations*. Through this concept, we can see that each actor contributes according to their institutional function in society. Meanwhile, schools only carry out teaching and learning processes between teachers and students, which tend to emphasize the transfer of knowledge between the two epistemic agents.

Knowledge transfer refers to transferring ideas from one entity to another, such as from a teacher to their students or a university to corporations. Relationships between university and industry can be part of the more general open innovation framework. This relationship is an example of knowledge transfer happening between epistemological groups. Universities are an important external source of innovations for business (Hanel & Pierre, 2006). Universities can transfer knowledge in the form of research results to help solve problems of the industry. The same thing happens in schools as epistemological groups; they also practice knowledge transfer. For example, a mathematics student may learn from a teacher to solve polynomials in class and may later use that knowledge to solve a similar homework problem. Or similarly in economics class, students use knowledge learned in their statistics course to analyze and evaluate survey data. Receiving and using knowledge here marks a successful knowledge transfer. The examples above display the process of knowledge transfer, specifically in schools and universities.

## 5 Knowledge Transfer in Schools

Much of what schools do can be categorized as education. This enterprise distinguishes them from universities and other scientific institutions that sometimes commence education, but does not make it their primary focus. Schools on the other hand exist for education. They might do things other than what might be seen as education, like charity events, but even those are held to educate students (on being charitable, for example).

Schools, like universities, are promoters of knowledge. But unlike universities, schools as organizers of education don't do much production in terms of newfound knowledge, but rather the production of new knowledge for each individual learner (Goldman, 1999). We can see that as the transferral of previously established knowledge.

The main epistemological problem to be addressed here is this: “How does knowledge transfer, particularly in the context of education?” Because education is inherently social (i.e. involving interactions between at least two people), we can try to answer this question by looking at the discourse of SE. In this section, we will mainly focus on testimony, a central topic in SE.

Education consists of the transferral of knowledge, often from teachers to students. But indeed it is not obvious to philosophers of education how knowledge transfer is possible at all. Some even deny the possibility of knowledge transfer; others say that even though knowledge transfer is possible, education should not rely on it but instead encourage students to seek knowledge on their own.

We should first address the question of whether or not knowledge transfer is possible. When we speak of the transferral of knowledge, we are referring of course to testimonial knowledge. Testimonial knowledge—or testimony—is (by definition) knowledge that is transferred from one person to another

(Lackey, 2011). So the question regarding the possibility of knowledge transfer comes down to whether testimony is accepted as knowledge.

Some epistemologists of testimony hold that one always has the *prima facie* justification to believe in a testimony without further examination (see Goldman, 2001). One can grant authority to someone and regard their testimony as believable. One as the hearer does not have to weigh the speaker's circumstances to regard their testimony as true and generate knowledge from that. But is this so? It seems like this position is quite problematic because there might be cases in which the speaker does not have knowledge of the content of their assertion or, in some cases, even intentionally distorts information.

Consider cases where someone would testify without actually knowing the content of their sentence. For example, let's say Budi tells one of his students that the capital of Indonesia is Bali, out of ignorance. And his student now believes that the capital of Indonesia is indeed Bali. Can the student's belief that the capital of Indonesia is Bali be counted as knowledge? We can reasonably say no. The student's belief is not knowledge simply because it is not true, though he has the epistemic entitlement to believe that it is. But the point here is that, as we can see from the example above, testimony is not sufficient to generate knowledge. We may also consider other cases where a speaker states a proposition that is not true (see also Goldberg, 2005).

Coady (2016) has also pointed to what he calls "pathologies of testimony". A testimony is pathological when it "present as distortions of or diseases of the normal case of telling and relying on what is told." One of the things he brings up is rumor. Rumor, Coady maintains, is a pathology of testimony because of its lack of strong justificatory base. In Coady's definition, at least, rumor is never epistemically justified. In this regard, he maintains that a pathology of testimony is unreliable. Education is seldom pathological. At least, it doesn't try to be nor necessarily is. Education is not rumor, and it is also not gossip nor urban myth, to relate to Coady. Though he ultimately argued that rumor only superficially appears as testimony (whilst taking a less pressing position on gossip and urban myth), the point to be made here is that unjustified statements from a speaker should not be regarded as any form of knowledge.

Rejection of testimony is reasonable by pointing to its sometimes unjustified basis. But this position is not realistic when we consider the fact that we often rely on testimony to generate knowledge (Lackey, 2011). We have to take a different approach. Testimony can be defended by implementing some limits. Indeed, believing without reason should not be seen as acquiring knowledge, but there are ways to defend testimony because testimony is not belief without reason. This seems to be the dominant voice amongst epistemologists of testimony. Many protect the position of testimony as one way to generate knowledge, though not without conditions.

One of the reasons for accepting testimony is "hearer's representation" (Graham, 2016). There's a consensus among epistemologists of testimony that one's assertion is not sufficient reason to believe it. When A states that p, B's belief as the hearer that p is not simply caused by A's statement. Instead, the belief that p should be formed by B's representation of A. For example, A should be reliable in his belief that p to provide the grounds for B's belief and B's belief that p is in turn formed by B's belief in A's reliability.

This relates to the idea of "authority" and "expertise". Expertise comes into the picture when we consider that many of us believe something based on the reliability of experts. Expertise indicates some reliability in a testimony. John Hardwig (as cited in Goldman, 2001) upholds that when a hearer relies on an expert's testimony, "that reliance is necessarily blind." *Blind* in Hardwig's terminology seems to indicate that a layperson is never rationally justified in believing an expert. Hardwig's skepticism towards testimony presents us with an important conundrum: how are we to correctly believe a testimony, even if they are from experts? This is especially relevant here because a student, in some sense other than Hardwig's, is *blind*, especially students that are exceptionally young.

A big aspect of the epistemology of expertise is trust. Whether or not a hearer justifiably trusts a speaker or how a speaker is presented as trustworthy is paramount to the hearer's knowledge generation. We can adopt Goldman's (2001) strategies in novice/2-experts problem to highlight how a hearer can have justification in trusting a speaker's testimony: (1) the speaker supports their testimony with arguments; (2) the speaker brings additional testimony from previously trusted experts; (3) the speaker is taken to be trustworthy by previously trusted sources; (4) the hearer has already examined the speaker's interests, biases, and track record.

Are teachers experts? To distinguish experts from novices, Michael Luntley (2009; 2016) has taken a phenomenological approach. He argues that the distinguishing characteristic of an expert is not their way of gathering and deploying knowledge, not even what they know, but rather their "capacity for learning". It is their ability to be conscious of their skills that matters. A nurse's ability to summarize their knowledge of the four-layer bandaging technique or a violinist's of an upbow staccato as "I do it like this" is the core of expertise. Does the same apply to teachers? A teacher might be an expert in pedagogical techniques, but



does it make them an expert in the subject they are teaching to the point that students, generally speaking, are justified in developing trust towards them?

This is a point of debate. Epistemologically speaking, it would be quite difficult to determine whether or not a teacher has sufficient capacity in Luntley's sense to be called an expert. Some teachers have and some don't. But let's consider cases where a teacher doesn't have sufficient capacity. Is their act of education epistemically unreliable?

One can still argue that a teacher does not have to be an expert to educate. Education is still possible without a teacher's expertise. Instead, it suffices that the teacher is trustworthy. Taking from Hinchman's "trust view", Lackey (2011) notes two important aspects of trustworthiness: (1) A speaker's testimony must serve as a reliable guide to the truth; (2) The hearer cannot have any evidence available that the speaker is untrustworthy. In the context of education, a teacher's testimony at its worst is a guide to the truth. From the teacher's teaching, students can and sometimes are even encouraged to seek the truth on their own. And as long as the students don't have any evidence to suggest that their teacher is untrustworthy, education is possible.

We should next address the extensive use of testimony in education. One can maintain that knowledge transfer, and thus education through testimony, is possible. However, because of the debate surrounding testimony, education should not rely on it but instead let students gather knowledge by themselves. This position, which has its background from the view that humans can only construct knowledge by combining their inherent faculty and real-world experiences, is called constructivism (Elkind, 2003). Constructivists say that students' interactions with the world are the building blocks of education. As such, they support discovery learning and Montessori. The role of a teacher is not instructing students, but facilitating students in their learning.

A more extreme position is called maturationism. Maturationists say that education should only passively support students' growth. They deny the practice of instruction in education. Maturationism emphasizes students' biology as that which naturally unravels their development (Hatch, n.d.). This position ultimately downplays knowledge transfer. However, the consensus in education supports the role of nurture, not just nature, in students' development. The idea is not surprising since millennia of civilization showed us that people benefit largely from education. It can be largely supported by the paradigm social epistemology brings to education and epistemology in general. It is not enough for epistemic agents to seek knowledge on their own. Other epistemic agents should, or maybe necessarily, intervene.

## 6 Conclusions

Understanding the nature of knowledge and how it can be transferred to ultimately understand education in the future is one of the main aims of this paper. To look at knowledge through the lens of social epistemology, we would be looking at testimonial (transferred) knowledge. It is not uncommon to find rejections to this type of knowledge, but whether it is valid or not should be up for discourse. At the very least, this paper helps display some of the debate and presents to us how we might approach education in light of it.

Using social epistemology as an approach to answer some puzzling questions about education is likely still viable for the future. We have seen in this paper how our perspective might be broadened by this new approach, by incorporating social dimensions of knowledge as resources for trying to ask about the nature of education. This is a good starting point, but it by no means should stop here. Settling the debates featured above can lead us to answer the normative questions in the philosophy of education.

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